CLAIMS

1. An electrical contact material comprising a matrix made of conductive metal and an unstable fraction incorporated into this matrix, characterized in that the unstable fraction has the property of decomposing between the operating temperature of the electrical contact and the melting point of said metal, with the release of a gas capable of destabilizing an electric arc.

2. The material according to claim 1, characterized in that said metal is silver or copper.

3. The material according to one of claims 1 and 2, characterized in that said unstable fraction includes at least one hydride.

4. The material according to claim 3, characterized in that said hydride is based on at least one of the elements chosen from the group: Ti, Zr, Hf, V, Nb, Mg, Ta, Cr, Mo, W, Fe, Co, Ni, La, Y.

5. The material according to one of claims 1 to 4, characterized in that said unstable fraction constitutes between 5 and 50% of its volume.

6. The material according to one of claims 1 to 5, characterized in that it includes, in addition, a refractory fraction.

7. The material according to claim 6, characterized in that said refractory fraction comprises at least one component chosen from the group: CdO, SnO_2, ZnO, Fe_2O_3, Ni, Fe, W, Mo, C, WC and MgO.

8. The material according to one of claims 6 and 7, characterized in that the refractory fraction and the unstable fraction constitute between 5 and 50% of its volume, the unstable fraction constituting at least 2% of said volume.

9. A process for manufacturing an electrical contact material, characterized in that it consists in:

- providing a blend comprising a conductive metal and an unstable constituent that decomposes at a temperature between the operating

temperature of the electrical contact and the melting point of said metal, with the release of a gas capable of destabilizing an electric arc;

- compacting this blend; and
- forming it according to the intended use.

10. The process according to claim 9, characterized in that said blend includes, in addition, a refractory compound.

11. The process according to one of claims 9 and 10, characterized in that the constituents of said blend are in the form of powders.

12. The process according to one of claims 9 to 11, characterized in that the unstable constituent is provided in the form of a precursor.

13. The process according to claim 12, characterized in that the precursor is alloyed with the conductive metal.

14. The process according to one of claims 12 and 13, characterized in that said blend is compacted by melting and casting in the form of a bulk ingot or billet.

15. The process according to one of claims 9 to 13, characterized in that said blend is compacted by cold pressing, either uniaxially or in isostatic mode, or by uniaxial hot pressing, or by impact compaction.

16. The process according to one of claims 9, 10 and 11 and as claimed in claim 15, characterized in that, after said blend has been compacted, it undergoes a sintering operation under atmosphere, pressure and temperature conditions such that the unstable fraction does not decompose.

17. The process according to one of claims 12 and 13 and as claimed in claim 15, characterized in that, after said blend has been compacted, it undergoes a sintering operation carried out at high temperature in the absence of hydrogen.

18. The process according to one of claims 12 and 13 and as claimed in

claim 15, characterized in that after said blend has been compacted, it undergoes a sintering operation carried out at high temperature in the presence of hydrogen.

19. The process according to claim 14 or one of claims 16 to 18, characterized in that said blend is formed by recompaction, rolling or extrusion.

20. The process according to claim 14 or as claimed in claims 17 and 19, characterized in that after the blend has been formed, it is subjected to a hydriding heat treatment.